THE INSTITUTE OF ENERGY FOR SOUTH-EAST EUROPE EDITION • 2021-2022

<section-header>

G etting back to normal, almost. In this latest issue of this IENE News bulletin we are catching up the thread from where we left it somewhere in the middle of the coronavirus

pandemic.

More specifically we turn our attention to Autumn/Winter 2021 when operations started slowly but steadily getting back to a kind of normalcy. Live presence in events and gatherings started once again although with huge precautions and strict health measures applied. With validation of vaccination certificates being the most obvious measure which was religiously kept in all our meetings. With the fear of the pandemic not completely gone, hybrid type meetings flourished which obviously put a strain on organisers.

In the same vein, limited overseas travel started again with IENE finding itself in Sofia, Bulgaria on October 14, 2021 to participate in a high level meeting on energy security convened by the Institute's partner in Bulgaria, Mr.Slavtcho Neykov. With a small but highly selected audience (some 25 people in all), including government officials from both sides, this type of focused meeting demonstrated once again IENE's constructive role in a rather volatile and unpredictable economic and energy environment. The discussion which took place at the meeting and the specific proposals tabled helped forge closer cooperation between Greece and Bulgaria in the energy sector, something which proved an asset in the coming months as the energy crisis culminated in the first half of 2022.

Indeed Greece and Bulgaria in the months that followed the IENE meeting in Sofia, coordinated closely their policies and energy security measures with very positive results for both countries. The smooth operation of gas supply between the two countries, inspite of Russia cutting off supply to Bulgaria in April 2022, ensured adequate gas supplies and send a strong message of unity and mutual support to the rest of the region.

Getting IENE's annual conference back on stage with live presence was another major challenge for the Institute as we approached the end of 2021.

The "25 th Energy & Development" conference was held on December 1-2, 2021 at the Divani Caravel hotel in central Athens and celebrated its jubilee year drawing a record crowd, most of it online. Nevertheless almost one third out of the 450 or so people who attended the event actually showed up at the conference hall which gave the event much needed life. Inspite of the organisational difficulties, the event was well supported by industry and the government, attracting top level speakers from Greece and abroad, including USA and Russia. More details on this and other events organised by the Institute in 2021/2022 you will find in the pages which follow.

But apart from events such as conferences and webinars- which became a mainstay of activity during the coronavirus lock downthe Institute has managed to pursue some important research and study activity, the most important of which was the completion and publication of the "SE East Europe Energy Outlook 2021/2022". This latest flagship IENE publication, of no less than 1250 pages, was published in early March 2022 following two years of intense preparation with the involvement of 29 researchers and authors and some 15 peer reviewers.

The release of the "Energy Outlook" was the highlight of the past months with a series of highly successful presentations and road shows, following in Athens, Sofia, Belgrade and Istanbul in the spring months of 2022. Without doubt publication of this major reference study, under the strenuous conditions of the pandemic, is a major achievement for a regional organisation with limited resources, and this is a most valuable experience which we look upon building further as we continue our work at the Institute.

The Current Energy Crisis and the Rise of Electricity Prices at the Heart of IENE Workshop



The members of the Institute of Energy of Southeast Europe (IENE) and energy sector professionals who participated in **a special webinar** of the Institute on October 24, 2022 had the opportunity to be informed of the latest developments regarding the various approaches to the energy crisis. The IENE webinar, entitled <u>"Energy Crisis and Prices"</u>,

attempted, with the participation of a select group of senior executives of energy companies and experts, to shed light on all sides of the evolving crisis, the unprecedented course of prices and its effect on the economy and the consumers.

A main finding of the above online event was the need to disconnect the price of electricity from the price of natural gas and how this can be achieved under the current operating conditions of the market, which is based on the well- known European target model. At the same time, the need to create the conditions required for bilateral contracts between producers and final consumers (PPAs) in the Greek market to be developed, which will allow the development of RES on the one hand and on the other hand the protection of consumers from the strong fluctuation of prices in the Energy Exchange. As pointed out by almost all the speakers, one of the main reasons why such high prices prevail in the Greek market (sometimes the highest in Europe) is due to the fact that all the buying and selling of electricity, contrary to what prevails in other European countries, is carried out through Energy Exchange and therefore the prices are determined by the prevailing System Marginal Price. (SMS)

In his presentation, the professor of Energy Economy of NTUA and Chairman of the Scientific Committee of IENE, Pantelis Kapros, referred to the limited competition in the domestic electricity market, highlighting its high dependence (98.5%) on the Pre-Day Market and advocated a radical change of the architecture of the market at European level, noting that "The current logic of the markets has reached its limits". The Managing Director for Energy Markets at Elpedison SA and Chairman of the Electricity Committee of IENE, Andreas Petropouleas, argued that there is no need for structural interventions in the Target Model (an opinion shared by PPC executive Alexandra Psirri) and called on the government to "rethink" the taxation of existing surpluses of power producers, considering that it undermines the investment climate.

Following that, the head of UNICEN, Antonis Kontoleon, underlined that the government's proposal to impose a ceiling on electricity generation for natural gas prices merits attention, as it could lead to a 30% reduction in wholesale prices for everyone, offering a horizon of stable prices for industry. He also called for the removal of disincentives for the immediate conclusion of PPAs between RES producers and industries that can act as a "shield" against the new - more adverse price environment that will take shape in the coming months, when the fixed electricity contracts of many industries of high energy consumption finish.

IENE Participates in the Annual International Conference of ASHRAE in Athens

The annual International Conference of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) was successfully held on October 5-7, 2022 in Athens, Greece, in co-operation with the Hellenic Chapter of ASHRAE. This year's Conference, entitled "Building Decarbonization 2022", focused on the potential for emission reduction in the building sector under the appropriate planning and application of rules in construction and functioning of new or refurbished buildings.

As buildings generally contribute a large part of the energy consumption of a country, varying from 30% to 40% of the total energy demand, the



building sector has emerged as one of the most crucial areas for achieving the goals of reducing greenhouse emissions as well as of clean power use and production.

With more than 100 presentations and special panel discussion sessions, this year's ASHRAE conference gathered approximately 400 participants, mostly from abroad. The majority of the presentations were based on research by university teams, research centers and companies, case studies and applications in building complexes with both the use of techniques aiming to improve energy efficiency.

IENE's Chairman, Mr. Costis Stambolis, was an invited keynote speaker in this highly important ASHRAE conference, and contributed a presentation on <u>"Energy Crisis:</u> <u>Opportunities and Challenges in SE</u> <u>Europe"</u>. IENE's Chairman was also a panelist in the discussion forum entitled "Moving too fast or too slow towards decarbonisation", which took place on the first day of the Conference.

■ IENE Presents Paper in Academy of Athens' Seminar on Energy Production, Transmission and Storage

The Academy of Athens organized a one-day seminar on "Energy Production, Transmission and Storage in Greece: Electricity – Natural Gas – Hydrogen" on September 30, 2022. IENE's Chairman and Executive Director, Mr. Costis Stambolis, was among the invited speakers of the seminar, delivering a paper on <u>"Technologies and</u> Prospects of Energy Storage Facilitating Penetration of RES in the Power Grid with Special Reference to the Islands of Crete and Kastellorizo".

This one-day seminar by the Academy of Athens aimed at providing a strategic viewpoint on the entire chain of production, transmission, distribution and storage of energy in Greece and the EU.

Special attention was given to the role of natural gas and the prospects for further exploration and production throughout Greece, vis-à-vis its total abolition by 2050 according to the current EU policy.

In his introduction, the Chairman of IENE stressed, among others, that storage projects are expected to enhance the increasing penetration of RES in the electricity mix of Greece and other countries in the region and therefore help to reduce the country's energy dependence on imported fossil fuels, as well as to strengthening power adequacy and energy competitiveness. Despite their comparatively small installed capacity today, the prospects for increasing the penetration of electrical energy storage technologies, particularly in batteries, are excellent, due to the progress of technology and the leap in cost reduction.

Mr. Stambolis also underlined that, as the installed capacity of RES increases, a lot more energy storage will be required (both from pumped storage and batteries) to cover gaps in RES production so as to normalize the operation of the electrical system. In the case of Greece, he estimated that the energy storage power capacity requirements by 2030 are in the region of 5.2-8.3 GW. He added that, as electrical interconnections develop in the mainland grid, but also in the islands, it is estimated that as the penetration of RES will increase so will the energy storage needs. Still, Mr. Stambolis emphasized that despite the extensive electrical interconnection program on the islands, for many years to come some 40 small islands will remain unconnected. These are suitable for the installation of stand-alone fully integrated clean electricity systems through the use of batteries and RES, capable of ensuring 95% energy autonomy.

Finally, IENE's Chairman presented the results of recent studies carried out by the Institute regarding Crete and Kastellorizo. The first, "Energy Transition of the Island of Kastellorizo", describes the autonomous RES/energy storage system proposed by IENE for one of the smallest Greek islands, which, however, is strategically located in the Dodecanese, thus making its energy autonomy of crucial importance. The latter, entitled "Feasibility Study of Energy Storage Systems' Integration in Crete", which was undertaken on behalf of Greece's IPTO, aims to assess the economic and environmental benefits from the introduction of energy storage systems on Greece's biggest island.



■ IENE's Annual Report approved by AGM

This year's Annual General Meeting of the Institute's Partners took place on Wednesday, July 27, 2022 and was held exclusively online. Twenty five, out of 42 partners, actually participated. Most countries in the region were fully represented including Bulgaria, Bosnia-Herzegovina, Cyprus, Greece, Montenegro, North Macedonia, Romania, Serbia and Turkey.



Apart from a detailed briefing by the chairman of IENE, on the Institute's activities in the first half of 2022, the other important item of the agenda was the approval of the Annual Report for 2021 following submission to all partners several days before. Following a concise presentation of the report and a detailed report of the accounts by and last year's balance by the chairman, the partners approved unanimously both the AR and the accounts for 2021. The Annual Report has now been posted on the Institute's web site and can be seen

Commenting on the Institute's AG, following its approval by the Board of Governors, IENE's Chairman Mr. Costis Stambolis commented: "The "Annual Report" contains a wealth of information on the Institute's activities including research and study projects, publications, educational, courses, conferences and related events. Also, as short profile of IENE's resident staff and external associates is included together with a detailed listing of the Board of Governors.

IENE's in Focus Workshop: The Growing Importance of Energy Storage and the Management of Electric Networks

The great expectations but also the challenges posed by energy storage were highlighted by the IENE oneday workshop entitled "Electricity Storage and Grid Management for Maximum RES Penetration" held in a central hotel in Athens on September 28.



The aim of the <u>Workshop</u> was to highlight the need for advanced energy management systems, which implies the application of large-scale RES, as well as to explore the related possibilities and challenges in a period in which the development of electrical energy storage systems revolutionized the field of RES. After opening remarks by the Chairman of IENE, Mr. Costis Stambolis, the workshop began with an introductory speech by Prof. Athanasios Dagoumas, President of RAE. Mr. Dagoumas referred in detail to the new legislative framework in Greece (law 4951/2022) regarding the licensing of RES and energy storage, as well as the position of the Authority regarding the new regulations.

This was followed by a short presentation by Mr. Patrick Clerens, Secretary General of the European Association for storage of energy (EASE), based in Brussels, who emphasized, among others, that the energy storage sector is gaining more and more importance in the EU, as it is now considered the fourth pillar of the energy system after production, distribution and consumption.

In the first part of the workshop, Prof. Mr. Pantelis Capros, Chairman of IENE's scientific committee and Director of the E3 MLab of NTUA, described in detail the findings of his recent study on the prospects for the development of renewable energy sources and energy storage for 2030 and 2050. Then Dr. Ioannis Kambouris, Chairman and CEO of the Southeast Electricity Network Coordination Center (SEENCC), spoke in detail on issues related to RES, energy storage and electrical interconnections in SE Europe.

In the second session chaired by Vassilis Rallis, co-founder of EarthIndex, Dr. Gregory Smedley and Professor Keyue Smedley from the One Cycle Control company team, focused on Grid Management through Power electronics, carrying out a comprehensive analysis of what the power

electronics are and how they are used by companiessuppliers of electricity but also by producers in order to achieve smooth conditions of injection of electricity into the network. In the third session coordinated by Dr. Takis Haviaropoulos, Independent Energy Consultant, in which Mr. Stavros Papakostas, Professor of NTUA, and Ms. Youla Tsiknakou, Hydroelectric Projects Director of TERNA Energy, participated, the interest focused on pumped storage systems. During the discussion, the announcement about the construction schedule of TERNA's two important pumped storage projects, in Amari in Crete (90 MW) and in Amfilochia (680MW), captivated the participants attention, with the licensing process almost complete, and their construction underway (Amari) or is due to start within 2023 (Amfilochia). TERNA's two major projects open the way for Greece to obtain much need storage capacity by 2023/2025.

In the sessions that followed, topics that covered the construction and applications of batteries, the design and construction of electrical networks with the aim for optimal utilization of RES systems and the specifications of large electrical energy storage systems in batteries,



were examined. Contributions were made by the following participants: Dr. Platon Baltas, General Manager of Euditi Ltd, Dr. Dimitri Ottaviano, Director of Engineering and Product Development of Sunlight Group Energy Storage Systems, Ms. Ivana Krstic, Product marketing manager, Grid Operations Management League, of Schneider Electric from Serbia, Nikolaos – Antonios Livanos, founder and CEO of EMTech SPACE P.C., Prof. Chresten Træholt, Head of Section for Power-to-X and Storage, Technical University of Denmark, Dr. Stylianos Loumakis, Chairman of Hellenic Association of Photovoltaic Energy Producers (SPEF), Alexandros Anastasios Dalagiannis, Green Deal Initiative leader & System Application Engineer – Microgrid, of Schneider Electric and Stelios Psomas, Advisor of the Hellenic Photovoltaic Association (SEF).

The IENE workshop concluded with a large round table discussion and an overall examination of the issue of the workshop and realistic goals were formulated for storage system applications in the Greek market.

The lead sponsor of the workshop was California based "One-Cycle Control Inc". The event was sponsored by TERNA Energy, NANKO Renewables and Sunlight. Communication sponsors were the energy sites Energia.gr and Energypress.gr.

12th Annual Capital Link Sustainability Forum Attracts Strong Interest Focusing on the Energy Agenda

Key Participation by IENE



This year's major **annual sustainability event organised by New York based Capital Link** attracted record participation with more than 300 delegates present at the Grand Hyatt Hotel in Athens where the event was held on, September 27, 2022. As usual all the key aspects of sustainability were discussed at length by well selected experts and senior executives from Greece and abroad.

In view of the current energy crisis of particular interest proved to be the session which covered energy issues and as panelists included some of the top names from Greece's energy sector. Mrs. Alexandra Sdoukou, Secretary General of the Ministry of Environment and Energy lead the discussion followed by Ms. Helena Athousaki, Head of ESG at the Motor Oil group, Dr.John Margaris, Deputy Chairman and Head of Technology at IPTO and Mr. Achilles Ioakimidis,Director for Sustainable Development at PPC. Costis Stambolis, IENE's Chairman and Executive Director, participated as the last speaker in this panel contributing some timely comments and critique on the currently pursued energy policies in Europe and Greece.

Costis Stambolis was especially critical on the lack of action and initiatives on the part of the EU and member states on the very issue of indigenous gas production which he sees as the most effective way for Europe to emerge out of this spiralling crisis. As Stambolis argued, "what we witness today is in effect a resource shortage crisis since there is not enough gas to go around globally and particularly in Europe. With EU's rush to get rid of Russian gas Europe is now short of gas which cannot be easily replaced by LNG imports. Neither the infrastructure or the commodity is there resulting in abnormally high prices".

IENE's chairman further noted that, "Plans to replace gas with renewables cannot possibly work in the short to medium term because we are lacking adequate electricity grids and installed capacity but even if we had all the necessary capacity gas and nuclear would still be needed to cover critical base load, while energy storage from pumped hydro or batteries is still not developed to the level capable of shouldering Europe's huge demand needs."

Award of Annual IENE Prizes to Mrs Yioula Tsiknakou and Mr Antony Gerasimou



IENE decided to award life achievement prizes, known as 'Prometheus' awards this year to Mrs. Yioula Tsiknakou and Mr. Antonis Gerasimou in their respective offices for a special award ceremony.

In July, 2022, the Chairman of the Institute, Costis Stambolis, presented the "Prometheus" award to Ms. Yioula Tsiknakou, stating that <u>"the "Prometheus"</u> award is awarded by IENE to Ms. Yioula Tsiknakou, Electrical Engineer and Director of Hydroelectric Projects of TERNA S.A. Energy for her overall contribution to the energy sector and more specifically for the promotion of hydroelectric projects in Greece and SE Europe. *"IENE acknowledges your key contribution to the development of Hydroelectric projects in Greece and SE Europe, both small and large, and salutes your singleness of purpose, your consistency and determination in the promotion and implementation of particularly difficult and technically demanding projects", IENE's chairman added.*



In a separate visit he made to the offices of the ITA Group on July 25, he presented the "Prometheus" award to Mr. Antony Gerasimou. Upon handing over the Promitheus statuette the chairman of IENE said: "Today we are bestowing the Prometheus award to Mr. Antony Gerasimou in recognition of his long-term and valuable contribution to the development and promotion of Renewable Energy Sources in Greece and beyond. In your long career, you managed to implement a series of pioneering projects in almost all sectors of RES, but also to combine productive activities, especially in the agricultural sector."

■ IENE Contributes to IEA's "In Depth Energy Policy Review of Greece"

Following an invitation by the Ministry of Environment and Energy and the IEA, IENE participated on July 14, 2022 in IEA's <u>"In Depth</u> <u>Energy Policy Review of Greece"</u> which took place in Athens.

An eight person strong team of IEA experts and analysts have positioned themselves in a specially arranged room on the Ministry's 6th floor and have been receiving representatives from most public and private energy companies and organizations in Greece.

As part of its presentation, IENE prepared a series of comments criticizing certain parts of Greece's current energy policy. These covered: the lack of Energy Security considerations in the current Greek energy policy, the misguided energy transition targets for Greece's islands, the weak policy measures for Energy Efficiency in Public and Residential Buildings, and the lack of support for Cogeneration of Heat + Power. In this IEA hearing the Institute was represented by Mr. Costis Stambolis, Chairman and Executive Director of IENE, Mr. Costas Theofylaktos, IENE's Secretary General and Chairman of IENE's Energy Efficiency Committee, and Ms. Irene Terzidou, Resident Research Fellow at IENE.



Participation of IENE at VIIMES Inaugural Meeting

IENE actively participated in the **inaugural meeting of VIIMES** which was held online on Monday, June 27, 2022. The meeting was held at senior experts level on the subject of "The Ukraine crisis and the geopolitics of energy in the Middle East".

In addition to Costis Stambolis, Chairman and Executive Director of IENE two other top energy experts had been invited to participate in the inaugural meeting and included Dr. Robin Mills, of Dubai based Qamar Energy and Dr.Carole Nakhle of London based Crystol Energy. The meeting was chaired by Hon. Ambassador Ali Soltanieh, the President of VIIMES. In his presentation Costis Stambolis stressed the rising importance of the Middle East and North African hydrocarbon producing countries at a time when Europe, following Russia's invasion of Ukraine and increased hostilities there, has willingly decided to severe all energy links to Russia which until very recently was EU's key energy supplier. In the aftermath of the Russian- Ukraine war the geopolitical sphere is being redrawn with major implications on the energy scene.

One of them being the potential for forging closer energy and economic links between Europe and the broader Middle East.



IENE's Chairman Actively Participated in "Flame" Conference in Amsterdam

Following an invitation by the organisers the Chairman and Executive Director of IENE participated once again in <u>"Flame"</u>, Europe's biggest and most influential energy and gas conference. The conference took place as usual at the Okura Hotel in Amsterdam from May 3-5, 2022.

Flame

3-5 May 2022 Okura, Amsterdam

UNLOCK THE NEXT STEPS IN THE ENERGY TRANSITION

The conference provided the opportunity for a thorough review of European and global energy developments focusing on gas and hydrogen. With the Russian oil and gas embargo looming and little progress in sight on energy transition, as Prof. Dieter Helm very presciently observed in his well documented address.the debate proved to be substantial. The limited options currently available through LNG for the transformation of Europe's gas market were also highlighted as the world is already facing an LNG shortage. The session where IENE's chairman participated, and was expertly moderated by Claudia Patricolo editor of CEE Energy News, dealt with gas markets in CEE and SEE and also included Borbala Toth from the RECC Institute in Budapest.

IENE's chairman Mr. Costis Stambolis raised the need to step up exploration efforts for the discovery and exploration of new gas fields in the various countries in the region. As Costis Stambolis pointed out in his concluding remarks, "the best way to ensure gas supply diversification and decoupling from Russian gas would be for the countries in SEE to develop their own substantial gas reserves. Between them these countries have a huge unexplored hydrocarbon potential spanning the Adriatic. the Black Sea and the East Mediterranean. Current estimates indicate some 4.5 -5.0 tcm of total commercially exploitable gas resources".

IENE Participated in Greece's Key Public Consultations, Submitting Influential Views and Proposals for Energy Future

National Climate Law

In the context of its participation in the Public Consultation organized by the **Ministry of Environment and Energy** in January, 2022, <u>IENE</u> submitted its final observations and comments regarding the **first National Climate Law of Greece**. These were formulated following a thorough review and comments contributed by the Institute's Scientific Committees.

According to the Institute's introductory comments, "the adoption of the first National Climate Law is undoubtedly a step in the right direction, since through its provisions the decarbonization of the energy system, the county's infrastructure and RES are further promoted. However, this bill, although it provides useful innovations regarding the process of energy transition, at the same t ime i t presents certain weaknesses, which can prove counterproductive. Through this law Greece adopts a specific legal framework for the alignment of its national policy with the objectives of the European Climate Law aiming to 55% emission reduction until 2030 and the transition to climate neutrality by 2050. However, it should be emphasized that the bill goes beyond the EU's ambitions in a number of areas, while it is failing to create an effective institutional framework that offers equal opportunities to all technologies that have the potential to contribute to the transition".

Regarding the proposal of the law for the commitment of Greece to abolish the sale of internal combustion engine vehicles, as early as 2030, IENE considers that such a move is premature in view of the developments in the EU and the growth of the national infrastructure network. Another point of contention as highlighted by IENE concerns natural gas and its role as the preferred transitional fuel. At the same time, the bill does not include provisions that favor the further development of circular economy through the production of biomethane from residues of the primary sector, while there is also no mention at all regarding the implementation of Carbon Capture and Storage systems (CCUS).

IENE's remarks and comments also cover the need for lower emissions by buildings (which the bill apparently ignores) and the installation and use of domestic oil and gas fired boilers which need to be in place well after 2030 as they can use low carbon liquid fuels and help improve energy efficiency with economic competitive ferms. In the context of the above public consultation by the Ministry of Environment & Energy, Costis Stambolis, Chairman and Executive Director of IENE, stated: *"The comments submitted by IENE regarding this very important legislative framework is the result of collective effort through the participation of the Institute's Scientific Committees. Six out of eight Scientific Committees of IENE actively participated in this consultation: the Electricity Committee, the Committee* on Natural Gas-Biomethane & Hydrogen, the Committee on Renewable Energy Sources, the Committee on Energy Efficiency, the Committee on Hydrocarbons (upstream), the Committee on Refining, Storage and Petroleum Trading (downstream). It is the first time that there has been such a wide mobilization of the Institute's Scientific Committees, which fully cooperated between them but also worked systematically and contributed effectively in the formulation of concrete, realistic and very constructive proposals".

Licensing and Operation of Offshore Wind farms

IENE submitted a series of comments and proposals on July 13, 2022, concerning specific articles of the government's draft law entitled "Provisions for the simplification of environmental licensing, environmental inspections and environmental protection, urgent forestry, spatial planning and urban planning provisions, establishing a framework for the development of Offshore Wind Farms, dealing with the energy crisis and issues of circular economy"



IENE's approach to **Offshore Wind Farms** is absolutely positive as it was publicly expressed about 18 months ago (1/2/2021) in the public consultation of the Hellenic Wind Energy Association (ELETAEN) on the New Institutional. Framework for Offshore Wind Energy under discussion at the time. Given its unwavering support for the speedy implementation of Offshore Wind Farms in Greece, the IENE first of all welcomes the decision of the Ministry of Environment and Energy to put the bill in question to public consultation.

IENE's firm position on the development of Offshore Wind Farms in Greece is the need for prior studies and measurements before proceeding with the detailed demarcation of the zones within which the construction and operation of offshore wind farms will be allowed. IENE decided to participate in the public consultation as the Institute wanted to express its support for the legal process involved and the steps to be taken in order to help speed up the whole licensing process.

The Tough Energy Challenges facing SE Europe under the Spotlight of IENE's 13th SE Europe Energy Dialogue

The "Energy Security, Energy Market Integration and Sustainability in SE Europe" was the key theme of this year's **SEE Energy Dialogue**, which focused on the serious challenges facing the energy sector in the wider SE European region. Supported by some of the biggest and strongest energy groups in the Greece and SE Europe, the **13th SEE Energy Dialogue** was held in Thessaloniki on June 16/17, 2022 -in hybrid form- by the Institute of Energy for SE (IENE) and attracted some 250 participants both online and through physical presence.

The purpose of this regional event was to bring together senior government officials, top business executives and energy experts from all SEE countries and beyond, and to facilitate the exchange of information and ideas, the networking, and the promotion of cooperation to address the growing global and regional energy and environmental challenges.

The two-day forum was attended by more than 65 distinguished speakers from all countries in the region, including top executives of government agencies, large companies, international and regional organizations, well-known Think Tanks, leading legal and consulting companies, as well as representatives from academia and independent analysts.

This year's Dialogue addressed the tough challenges facing of the region's energy sector. The sessions focused on the topics of energy security and EU's major effort to reduce its dependence on Russian oil and gas, while maintaining its focus on decarbonation and the goals of the Green Deal. The opening session of the conference examined the global and regional situation in the energy market with the participation of John Roberts, Energy Security Specialist, from the UK and IENE Visiting Research Fellow, and Tim Yeo, Chairman, The New Nuclear Watch Institute (NNWI), Member of Parliament and former UK Minister for Energy in the UK, while presentations were made by Apostolos Petropoulos, Energy Modeler in the IEA World Energy Outlook team, Dr. Yurdakul Yigitguden, Independent Energy Advisor and Former Coordinator of OSCE Economic and Environment

Activities, Organization for Security and Co- operation in Europe, and IENE Distinguished Fellow, Prof. Andrey A. Konoplyanik, Adviser to Director General, Gazprom export LLC, Distinguished Fellow, IENE as well as Ms. Eugenia Gusilov, Director, ROEC and IENE Partner in Romania. Most speakers agreed that the causes of the current energy crisis should not be sought in the war in Ukraine alone, but in what has happened in Europe over the past two decades. During this period, too many countries neglected to take measures and policies to ensure their energy security. Instead, they chose to remain captive to imported energy, which was the easiest and cheapest solution. Today, enhancing energy security requires multiple investments, increased domestic energy production in Europe, energy storage and massive RES penetration.

mmm



Speaking during the 2nd session of the Energy Dialogue Prof. Pantelis Kapros, Director of the E3M Lab of the National Technical University of Athens and Chairman of the Scientific Committee of IENE, stressed the role of the EU Green Deal, in the light of recent developments in Ukraine, including the "Fit for 55" package and the REPowerEU. In his presentation for Prof. Kapros examined some policy proposals related to the REPowerEU plan, which he described as crucial for the EU, in terms of how it can respond to the crisis, while special reference was made to the ambitious plan for the introduction of 40 megatons of green hydrogen before 2030.

Significant interventions were also made by Slavtcho Neykov, Chairman of the BoD, Energy Management Institute (EMI), and Partner of IENE in Bulgaria, Dr. Charles Ellinas, Senior Fellow, Global Energy Center, Atlantic Council and Visitor Research Fellow at IENE, as well as Prof. Ionut Purica, Romanian Academy and WEC National Member Committee and Distinguished Fellow of IENE, and of Dr. Leo Drollas, Independent Energy Consultant and Distinguished Fellow of IENE from the United Kingdom was of exceptional importance. During his speech Dr. Drollas focused on the need to include oil in the dialogue regarding the fuels that will lead us to the Green Transition.



In the session moderated by Nicholas Farantouris, Professor of the European Chair Jean Monnet in European Competition, Energy and Transport Law and Director of the Postgraduate Program in Strategy, Law & Energy Economics at the University of Piraeus, issues related to the energy transition were extensively discussed. Panelists included Dr. George Kremlis, Advisor to Greece's Prime Minister on circular economy. Mrs. Liana Gouta, Director of Energy Policy and International Relations of the Hellenic Petroleum Group, Katerina Sardi, CEO and Country Manager of Energean in Greece, as well as of John Vougiouklakis, Director, Strategy of PwC. Other important sessions covered the regional gas market: alternative gas routes, LNG and Biomethane the War in Ukraine and energy security Implications for SE Europe. Several speakers from European and regional organisations and companies hotly debated the issues involved. They included Dr.James Watson, Secretary General of Eurogas, Boyana Achovski from Gas Infrastructure Europe, George Polychroniou, from DEPA Commercial, Dr.Pantelis Vogiatzis, from EDA Attiki and Theodore Terzopoulos from DEDA in Greece, Theodora Georgieva, from ICGB in Bulgaria, Nicholas Satras from Motoroil in Greece, Robert Bosnjak from Plinacro in Croatia and Milan Zdravkovic from Srbijagas in Serbia, Gokhan Yardim from ADG Natural Gas Consultancy in Turkey, Nikos Katsis from DESFA in Greece, Dr. Thrassy Marketos and Dr. Marika Karayianni senior energy experts also from Greece.

A session which attracted a lot of interest focused on «Networks, Energy Storage and Innovations for Higher RES Penetration», with Dr. John Kampouris, Chairman and CEO of the SEleNe CC Regional Electricity Coordinator Center (SEleNe CC) based in Thessaloniki, being the keynote speaker. Other key interventions were contributed by Mrs. Vesna Borozan, Professor at the Faculty of Electrical Engineering & Information Technologies, Univ. of Sts Cyril and Methodius and IENE Partner, from North Macedonia, of Dr. Mustafa Tiris, General Manager, TDinamik Energy, from Turkey, of Stella Zacharia, Head of Energy Policy and Regulation at TERNA Energy, by Zisimos Mantas, Head of Project Development and Licensing at Motor Oil, by Costas Theofylaktos, Secretary General of IENE and Chairman of the Energy Efficiency Committee. Electricity issues were discussed at length in the session which included Andreas Petropouleas, Director of Energy Management of ELPEDISON, member of the Board of Directors and Chairman of IENE's the Electricity Committee and Prof. George Ioannou, CEO of the Hellenic Energy Exchange Group (EnEx). Prof. loannou referred extensively to the results from the one year successful operation of Greece's new electricity market based on the Target Model. In the same session most important contributions were made by Tamer Emre, Director of Market Operations, Energy Exchange Istanbul (EXIST), from Turkey, by Konstantin Konstantinov, CEO, Independent Bulgarian Energy Exchange (IBEX), from Bulgaria and by Milos Mladenovic, Managing Director, South East European Power Exchange (SEEPEX), from Serbia. Between them the above CEO's offered a panorama of the region's electricity market and the serious challenges posed by market integration and market coupling.



"Electricity and Gas Market Integration in SEE" were also discussed in a separate session which included Aleksander Mijuskovic, Chairman of CGES in Montenegro, Professor Pantelis Biskas from the Aristotle University of Thessaloniki, Mr.Shkelqim Bozgo, head of SEA consulting in Tirana, Antonis Kontoleon, Chairman of UNICEN in Greece, Frederick Bernthaler, head of legal at CEGH in Vienna and Martin Georgiev, CEO of Bulgaria's National Electricity Company.

Other contributors in this year's Energy Dialogue included Thomas Lamnidis, IENE Partner and CEO of LL Law firm, Kaloyan Staykov from EMI in Bulgaria and Nicholas Sofianos, IENE Partner and chair of the Institute's RES Committee, John Grigoriou, VP Continental Europe Council (CEEC) and IENE Partner, Dr. George Kovacic from Croscorp International in Canada, Nicodemos Nicodemou from CHCC in Cyprus, Dr.John Bassias, Visiting Research Fellow of IENE and Teresa Fokianou, chairwoman of IENE's Hydrocarbon Upstream Committee. The event was supported by a group of companies as sponsors, including KG Law Firm, one of the leading law firms in Greece, and HEDNO, which were the Strategic Sponsors of the Conference. Hellenic Petroleum Group and MotorOil, the two leading refining groups in Greece, the Hellenic Energy Exchange (EnEx), DEPA Commercial, Elpedison and TERNA Energy participated as sponsors. Also the event was supported by Energean, the Independent Bulgarian Energy Exchange (IBEX), the Independent Transmission Operator of Greece (IPTO) and EnSCo. Media partners of the event included energia.gr, energypress.gr, Balkan Green Energy News, New Europe, CEENERGY News and the Hellenic Edition of Foreign Affairs.





The inseparable connection between the energy sector, economy and development in Greece and Southeast Europe was highlighted in the **annual National Conference "Energy and Development"**, which was organized by the Institute of Energy for SE Europe (IENE) under the auspices of the Ministry of Environment and Energy, on 1-2 December 2021 in Athens with the participation of more than 78 distinguished speakers and panelists from Greece and abroad.

The conference's main theme was <u>"Energy Transition</u> and Achievable Solutions- Global and Regional <u>Perspectives</u>" and provided the opportunity for a comprehensive examination of the current energy crisis. Energy suppliers, traders and consumers actively participated in discussions and all relevant issues were hotly debated. In this context the key role of natural gas and renewables but also of nuclear power were discussed at length. As IENE's Chairman Costis Stambolis pointed out in his opening remarks, *"Today the challenges are completely different than they were 25 years ago when this conference first started, and are mainly related to the energy transition in a clean fuel environment. The goal, must be to provide uninterrupted and clean energy at affordable prices".*

The country's political administration strongly backed the Institute's flagship conference, including speakers among others: the Minister of Development and Investment, Adonis Georgiadis, the President of RAE, Dr. Athanasios Dagoumas, the General Secretary of Energy and Mineral Raw Materials, Alexandra Sdoukou, the Head of Environment of SYRIZA, Socratis Famellos. The Minister of Environment and Energy, Costas Skrekas, also addressed the conference via video message. Former Energy Ministers John Maniatis and George Stathakis actively participated in different sessions. The group of overseas speakers who travelled to Athens comprised a strong Turkish delegation consisting of Gohan Yardim, an IENE partner and head of the Ankara based Anadolu Natural Gas Trade and Consultancy, Dr. Yurdakul Yigiguden, an independent energy consultant and long time Associate of the Institute and Ahmet Turkoglou the CEO of the Turkish Energy Exchange, (EXIST) but also a high level representation from Bulgaria which included Slavtcho



Neykov, an IENE partner and chairman of the Sofia based Energy Management Institute (EMI) and Konstantin Konstantinov, the CEO of IBEX, the Independent Bulgarian Energy Exchange.

Equally important was the participation of three other senior energy figures, who travelled from overseas to participate and speak in IENE's annual event, and included Dr.Charles Ellinas, Senior Fellow of the Atlantic Council and Research Fellow at IENE currently based in The Hague, Mr. Apostolos Petropoulos, senior modeller at the IEA in Paris who presented the World Energy Outlook 2021, Ms.Marianna Liakopoulou who is a Policy Associate at EFET based in Brussels and Dr. Gina Cohen, also an IENE Partner who is Lecturer and Consultant, Natural Gas Industry from Herzliya in Israel.



Several other speakers joined the event online and among them were Dr. James Watson, Secretary General of EUROGAS, from Brussels, William Polen, Senior Director, United States Energy Association, Prof. Andrey Konoplyanik, Advisor to the General Manager of Gazprom export LLC, Co- chair of the Russian side of the Stream 2 "Internal Markets" project of the Russia-EU Gas Advisory Council, Boyana Achovksi, Secretary General of Gas Infrastructure Europe (GIE) from Brussels, Dr. Bassam Fattouh, Director of the Oxford Institute for Energy Studies (OIES), Dr. Leo Drollas, Independent Energy Consultant, Tim Yeo, Chairman of The New Nuclear Watch Institute (NNWI) from the UK, Dr. Narsi Ghorban, Secretary to the Environment and Energy Commission of the ICC (Iran Committee) from Tehran, Milos Mladenovic, Managing Director, SEEPEX, Serbia, Aleksandar Mijušković, Advisor to the Executive Director, Coordinated Auction Office in South East Europe SEECAO, Fadil Ismaili, CEO, New Kosovo Electricity Company, Kosovo and Mihailo Mihailovic, Independent Energy Consultant, Serbia.

The main sponsors included Hellenic Petroleum (ELPE), the Hellenic Energy Exchange, the Independent Power Transmission Operator S.A. (ADMIE) and law firm KG Law. The supporters were ENERGEAN, Elpedison, Mytilineos, Motor Oil Hellas, DESFA, Grant Thornton, DAPEEP and Ensco. Conference's activities are supported by Sunlight, EssEnCon, GreenTop, Lamnidis Law, CSMED and Energy Live. While the communication sponsors included energia. gr, the newspaper Naftemporiki and naftemporiki.gr, the international Foreign Affairs Media and energypress.gr.

FORTH / IENE Conference: Hydrocarbons as Part of Solution for Energy Transition



All the important aspects at local and global level concerning the role of hydrocarbons in the Energy Transition were examined during a scientific conference jointly organized by the Petroleum Research Institute (FORTH) and the Institute of Energy for South-East Europe (IENE) titled **"The Hydrocarbons as part of the energy transition, Facts and Policies"** which took place on October 25, 2021, at the KAM Hall in Chania with simultaneous livestreaming. The conference focused on the developments regarding the role of hydrocarbons in the energy transition in Greece and Europe. As important changes are taking place it was considered appropriate to hold a discussion at experts' level with the aim of highlighting the serious challenges that energy transition is facing as we move towards a low emission environment.

A significant number of local actors and a select group of scientists and business executives spoke during the Conference. The conference began with opening remarks by Vassilis Digalakis, Chairman of the Standing Committee on Educational Affairs of the Parliament and MP in Chania with New Democracy, Pavlos Polakis, MP in Chania with SYRIZA, Manousos Voloudakis, MP in Chania with New Democracy, Nikos Kalogeris, Deputy Regional Governor of Crete, Nektarios Tavernarakis, President of FORTH, and Evangelos Diamantopoulos, Rector of the Technical University of Crete.

New challenges for Greek-Bulgarian Cooperation in the Energy Sector

A high <u>level Greek-Bulgarian Energy Meeting</u> that was held in Sofia on October 14, 2021, helped forge closer links in the energy sector between the two countries.

The aim of this highly focused meeting which was coorganized by host Energy Management Institute (EMI) of Bulgaria, and the Institute of Energy for Southeast Europe (IENE), was to explore possibilities for further expansion and strengthening of the already close cooperation between the two neighboring countries in the field of energy.

This special ad hoc meeting was chaired by Mr. Slavtcho Neykov, Chairman of EMI, former Director of the Energy Community, as well as former Secretary General of the Ministry of Economy and Energy of Bulgaria. IENE was represented by the Chairman and Executive Director of IENE, Mr. Costis Stambolis, as well as the General Secretary of the IENE, Mr. Kostas Theofylaktos, who also chairs the Energy Efficiency Committee of the Institute.

The meeting was attended by the Deputy Minister of Energy of Bulgaria, Ms. Iva Petrova and by the Ambassador of Greece to Bulgaria, HE Mr. Dimitris Chronopoulos, who was accompanied by senior officials of the Greek Embassy in Sofia. The Bulgarian side was also represented by Ms. Tanya Mihaylova, Director of the Diplomatic Institute and by senior officials of the Bulgarian Ministry of Foreign Affairs.

Furthermore, the meeting was attended by high-ranking executives of Bulgarian and Greek energy companies based in Sofia, including executives from AES Bulgaria, Countlurglobal, Bulgartransgas, Overgas, EKO Bulgaria and Terna Energy. The ad hoc meeting of EMI-IENE began with opening remarks by the Chairman of EMI Mr. Neykov and of the Deputy Minister of Energy of Bulgaria Mrs. Petrova, followed by a detailed presentation of the Chairman of IENE Mr. Costis Stambolis regarding the energy situation in Southeast Europe while the latest developments in Greece and Bulgaria were highlighted.



A lively discussion ensued between the participants during which all of them agreed that significant opportunities for expanding the already established cooperation in the fields of gas, electricity and energy efficiency exist and should be examined, especially during this period of time that major changes are taking place in the structure and operation of regional energy markets.

The discussion focused on the anticipated operation of the Gas Trading Hub by EnEX in Greece within 2022, the further development of cross-border trade in electricity and gas between the two countries and the application of CCUS technologies in lignite power plants on both sides of the border.

IENE's E-mobility and Smart Cities Contributes to European Mobility Week





The important developments concerning e-mobility were discussed during the web conference on <u>"Electric</u><u>Mobility and Smart Cities</u>", organized by the Institute of Energy for South-East Europe (IENE) on 22 September 2021, which took place as part of the European Mobility Week. The conference and sponsored by Hellenic Petroleum.

The developments around electric mobility and the promotion of new innovative technologies of "smart" means of transportation were discussed at length at the Webinar, while special emphasis was given to the issues arising from the introduction of electric vehicles in the Greek market and beyond.

IENE's online conference was opened with introductory remarks by the Chairman and Executive Director of the Institute, Costis Stambolis, who pointed out that e-mobility is an area with a wide range of applications related to a broad grid of electric vehicles.

"The issue is not just to increase the number of electric vehicles, which is of course a legitimate goal, but to focus on how the quality of life in urban and sub-urban centers can be improved in general, and how the existence of an expanded electricity network can help", said Stambolis.

Taking the floor, Ioannis Tselikis, Head of e-Mobility Office of the Ministry of Environment and Energy and Special Advisor to the Secretary General of Energy and Mineral Resources, referred to the Ministry's policies and for the promotion of electrification. According to the data presented, electric mobility in Greece is developing at a satisfactory pace, while charging infrastructure and market development have been launched. As Mr. Tselikis stated, "in July 2021, the market share of electric vehicles reached 5.53%, a percentage which covers the 101% growth annual target of the National Energy and Climate plan. In fact, in the second quarter of 2021, registrations were nine times more than in the corresponding quarter of 2020". Regarding the charging infrastructure, Mr. Tselikis pointed out that "we have reached the European target of one charger per ten vehicles, while in 2021 further steps are expected to take place as more and more players enter the field of public charging". Already in the first eight months of the year, the publicly accessible charging points have more than doubled."

This was followed by the intervention of Dr. Eva Nanaki. executive of the Department of Alternative Energy Sources and New Technologies of Hellenic Petroleum SA and research associate of Aarchus University, who presented the prospects for the development of e-mobility and "smart" cities in Greece. "E-mobility in recent years has experienced an explosive growth at European and global level and it represents a mature and attractive alternative to conventional vehicles. "Smart cities can integrate e-mobility into urban centers with their various technologies," she said. From his side, Dr. George Ageridis, Head of the Energy Efficiency Division at the Center for Renewable Sources and Energy Saving CRES), presented the policy for e-mobility in the Greek energy environment. Referring to the prospects of e-mobility, Mr. Ageridis said that "there are a number of fields of use and a number of possibilities to engage e-mobility in the energy chain. Their utilization contributes to the formulation of a policy of electrification of transport having as a goal the decoupling from imported fossil fuels, a parameter particularly critical for Greece, the extensive utilization of local energy potential, network stability, and the creation of domestic added value in world-class cutting-edge fields."

Anastasios Matikas, E-Mobility Business Development Manager at Hellenic Petroleum SA, presented the technical challenges for the development of e- mobility, expressing optimism for the prospects of the sector, stating that "I am optimistic about the future of e-mobility in Greece, as there is strong political will and serious work is being done at legislative level, while until recently there was a delay compared to the rest of the European Union in terms of investment in the expansion of the charging network of electric vehicles, now significant steps are being taken in this direction."

The meeting ended with the intervention of Stamatis Asimis, Key Projects & New Technologies Manager at Sunlight SA, Greece's leading battery manufacturer, who spoke about the role of energy storage systems in sustainable e-mobility and "smart" cities. "Currently, the market for rechargeable batteries is projected to more than double by 2030, with lithium- ion batteries, which have an increased lifespan and fast charging capability, gradually replacing lead-acid batteries. *"Lithium-ion batteries can make a significant contribution to the creation of charging facilities for electricvehicles, as well as systems for 'smart' homes, 'smart' businesses and, in general, 'smart' cities."*

Educational Activities

■ IENE Webinar - «Sustainable Financing with ESG Criteria and Green Bonds»



The Institute of Energy for SE Europe (IENE) held a very successfully **3-hour webinar** which focused on sustainable investing through ESG and Green Bonds. Having placed high on its agenda the promotion of Sustainable Financing through Green Bonds and Responsible Corporate Governance, this latest IENE organized event entitled **"Sustainable Financing with ESG Criteria and Green Bonds"**, which took place on February 15, 2021, attracted more than 200 participants from Greece and abroad.

The purpose of the webinar was on the one hand to highlight the way in which companies can take advantage and benefit from ESG practices and on the other to inform about the financing of "green investments" through the issuance of Green Bonds. Top experts and senior market executives participated in the Webinar. The event began with a short introduction by the Chairman and Executive Director of IENE, Costis Stambolis, who referred to the crucial role of ESG criteria in creating added value for businesses.

In the first session of the Webinar, in the discussion on "Investments in energy with ESG criteria", Ms. Peggy Papastavrou, Director, Listings & Issuers Division, of the Athens Exchange Group, initially referred to the new ESG index established by the Athens Stock Exchange in which many listed companies are participating.

The index has performed exceptionally well with several new company additions over the last 2 months. Subsequently, Mr. Spyros Venetsianos, Deputy General Manager of EUROBANK, focused on the use of ESG in the banking sector and stressed that banks are increasingly focusing on ESG factors in order to understand the performance of a business and evaluate its reliability and viability before proceeding on investment lending decisions.

According to Mr. Venetsianos, the disclosure of the performance of the companies on ESG criteria enhances transparency in their sustainability practices and helps investors and financial institutions make better decisions.

Taking the floor, Ms. Elena Athousaki, ESG Director, Sustainable Development and Climate Change at Motor Oil, referred to the ESG strategy of Motor Oil, one of Greece's major energy and industrial companies, and made clear that a good performance of a company in environmental, social and corporate governance issues may lead to improved financial results, attract investors and contribute to the creation of a long-term competitive advantage.

At the end of this section, Mr. Shlomi Levi, Head of Finance of Energean Israel, focused on integrating ESG criteria into the company's strategy and the benefits of its adoption. More specifically, he referred to the company's project for the transofrmation of the Prinos oil field into CO_2 storage, to the electrification of all facilities with RES and to the prospect of hydrogen production. With these actions being totally compatible with ESG criteria.

In the second session of the webinar, Mrs. Irini Terzidou, Research Fellow, IENE Mr. George Kofinakos, Senior Advisor & Managing Director StormHarbour Securities LLP, UK, and Mr. Sean Kidney, CEO, Climate Bond Initiative, participated in a conversation regarding Green Bonds, with Mr. Vassilios Rallis, Board Member of EarthIndex and IENE Research Associate as moderator.

In this session, Mrs. Terzidou at first presented the investment needs for sustainable financing and the role of Green Bonds, and then Mr. Kofinakos referred to the benefits arising when companies or organizations are investing in the Green Bond market. IENE welcomed the presence of Mr. Sean Kidney, CEO of the Climate Bond Initiative in the Webinar, who referred to the exponential growth of the green bond market worldwide and green financing instruments as a whole and underlined their projected future contribution to energy transition and climate neutrality in general.

The Webinar ended with concluding remarks by the Chairman and Executive Director of IENE, Costis Stambolis who expressed optimism on the use of Green Bonds as an important tool for the financing of green projects not only in Greece but in the whole of SEE. The event was sponsored by two of Greece's leading energy companies, DEPA Commercial and Energean. Greece's oldest energy portal, energia.gr, acted as media partner.



Educational Activities

■ IENE's Webinar on "Solid Waste and Energy" Reveals Niche Investment Opportunities

The Institute of Energy of Southeast Europe (IENE) organized a webinar on <u>"Solid Waste and Energy"</u>, on April 12, 2022, which focused on the solutions and opportunities to transform the management of municipal waste in Greece from a problem into an opportunity for wider development.

The Webinar was coordinated by Dr Dionysios Xenos, Chemical Engineer, Environmental Consultant and Member of IENE's Executive Committee, and Mr Dimitris Avarlis, a journalist at energia.gr, while the event opened with welcome remarks by the Chairman and Executive Director of IENE, Costis Stambolis.

Dr. George Kremlis, Principal Advisor to the Greek Prime Minister on energy, climate, environment and circular economy issues, referred to the National Planning Guidelines for waste management and energy recovery in line with the waste hierarchy pyramid, stressing that now we have an opportunity to strengthen the Circular Economy.





In the first session of the webinar high-ranking officials from the European Commission and the European Investment Bank (EIB) participated. Mr Panagiotis Thanou, Programme Manager - EU policies, Desk Officer, Senior specialist in administrative capacity core matrix of DG Regio, Mr Philipp Horn, Head of Division for Circular Economy, JASPERS, Environment & Natural Resources, European Investment Bank (EIB), Mr Christopher Edge, Senior Sector Engineer-Waste Management, JASPERS, Environment & Natural Resources, European Investment Bank (EIB), and Mr Christos Peolidis, State Aid Expert, JASPERS, Environment & Natural Resources, European Investment Bank (EIB) took respectively the floor and analyzed various EV initiatives and programmes on circular economy and solid waste management.

The second session opened with an address by the Chairman of the Environment and Energy Committee and Mayor of Agrinio, Mr. George Papanastasiou, who pointed out that the appropriate tools should be given to municipalities and their financing should not be restricted to municipal fees. He noted that the suitable equipment isn't available everywhere and today there are still municipalities without blue bins. He underlined that *"waste is common place for both central administration and municipalities"*.

The President of the FODSA of Central Macedonia, Mr. Michalis Geranis, said that "the 4th industrial revolution is the most radical as the previous ones brought huge pollution. But the 4th industrial revolution should be combined with the circular economy, otherwise there will be a problem at global level. The most pressing issue is to provide the necessary tools immediately, while the local government should act as a locomotive to reach the agreed goals."

■ IENE Chairman Delivers Seminar at the University of Piraeus on "The key challenges facing the global energy system"



Upon the invitation of Professor John Maniatis, the chairman and Executive Director of IENE, Costis Stambolis on November 19, 2021 conducted a seminar to the University of Piraeus graduate course on <u>"Climate Crisis and Information and Telecommunication Technologies"</u>.

The 3-hour seminar covered a wide range of topics ranging from energy demand and supply, oil and gas market fundamentals, the role of fossil fuels in climate change, the stride towards renewable energy sources and the challenge of decarbonisation. Another key area of discussion was the importance of energy security, i.e the provision of uninterruptible (24/365) oil, gas and electricity supply, and the need to maintain stable market conditions as we move deeper in energy transition.

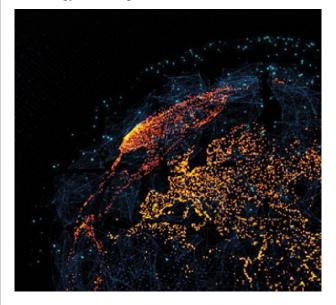
More than 40 graduate students attended the course which was introduced by Prof.John Maniatis, the course's chairman and former minister of Environment and Energy.

In his introductory remarks Prof.Maniatis praised the role of the Institute of Energy for SE Europe(IENE) as a true source of really factual yet comprehensive information and analysis on energy issues. Furthermore he spared no compliment in introducing the lecturer providing a useful background on his work and professional career as an energy analyst and scholar.



■ IENE's Pioneering Seminar Ponders 'Managing Energy in a Complex World'

A one-month <u>educational seminar</u>, organised by IENE in association with STRATEGY TECHNICS, was successfully completed on November 26, 2021 with the participation of nearly 20 participants from Greece and South-East Europe. That was a graduate-level educational programme which drew professionals from a diverse background, including electrical energy companies, major banking, local and multinational law and accounting firms, and energy consulting.



This IENE seminar was the first of its kind, with the Institute joining forces with STRATEGY TECHNICS, an Athens-based strategy & organization specialist consulting firm. Energy Transition constituted a core subject of the seminar around which strategies and funding approaches and mechanisms were analysed and discussed. The current debate on climate change and mitigation policies were fully examined together with a whole range of appropriate technologies both current and under-development.

In addition to demonstrating the complexity of presentday energy markets -whether in electricity, oil & gas or renewable energy sources- the seminar covered at length the crucial role of strategy in dealing with uncertainty, anticipating mega-trends, charting business policy and overcoming adverse market conditions.

The programme comprised 40 hours of tuition by a number of top subject- matter experts, touching all aspects of the current and future state of energy markets. It also included exercises and teamwork undertaken by teams of students which were formed according to the interests and capabilities of the participants.

Publications & other

■ IENE Publishes New Fact Sheet on "Gas Markets in Europe and the Russian-Ukraine Conflict"



In 2020 IENE introduced its series of <u>Fact Sheets</u> which aim to present in a comprehensive yet concise manner a broad range of subjects related to the energy sector in SE Europe.

Following the publication in April 2020 of its latest Fact Sheet on SEE Electricity, in May the Institute presented its new Fact Sheet which deals with Gas Markets

in Europe and the Russian-Ukraine Conflict. Following Russia's invasion in Ukraine on February 24, the European Union is facing an unprecedented crisis as a result of its over-dependence on Russia's oil and gas imports.

Almost 40% in average of European gas imports come from Russia and hence a decoupling from such high exposure is now becoming top priority for Brussels planners but also for most national governments. However, Europe is in a weak position to impose gas related sanctions, in order to deprive Russia from sizeable exports, causing a negative impact on its own economy. In this context, the EU has laid out some specific plans aimed at reducing fossil fuel imports from Russia.

IENE roadshows SEE Outlook



IENE concluded in May the first leg South East Energy Outlook 2021/2022 roadshows, with presentations through specially organized events in Greece, Bulgaria, Serbia and Turkey which attracted select audiences from the local energy and financial sectors. The idea behind the above roadshows was to meet local audiences of energy professionals and engage with them through the presentation of a major study with direct bearings to energy developments in the region.

Mr. Costis Stambolis, IENE's Chairman and Executive Director, who was also the coordinator and principal editor of the study and Mr. Costas Theofylactos, a study contributor and head of IENE's Energy Efficiency Group were the main presenters of the study in the roadshows. It is estimated that a total of approx. 300 participants actually attended the above presentations by physical presence or online.Now, a second series of roadshows is being planned in the near future and destinations will include Tirana, Zagreb, Bucharest, Budapest. Further 'Outlook' type presentations are being considered for early 2023 in London and Brussels provided that adequate backing can be secured.

RAE Assigns to IENE a Special Cost - Benefit Study on the Expansion of Natural Gas Transmission Network to Western Greece



The Institute of Energy of SE Europe (IENE) completed in February 2022 a <u>special study</u> commissioned by Greece's Energy Regulatory Authority (RAE) in order to examine the feasibility of expanding the national gas transmission system to Western Greece, primarily by pipeline, focusing on the regions of Epirus and Western Greece. A major part of the study is devoted in the cost comparison between network expansion through pipeline and introduction via LNG or CNG.

This study is considered of great importance, because in the context of the national energy policy natural gas, as a bridge fuel, will support the energy transition of the country to a zeroemission economy, while the existing transmission networks that are expected to be expanded will also be able to distribute gaseous fuels from RES, such as biomethane and hydrogen. In this

context, this is the type of infrastructure which will provide the means for the further penetration of new environmentally friendly energy sources into the Greek energy system. This study has arrived at some useful some conclusions, such as that the transport of natural gas either by pipeline or by truck and / or ship (LNG) has certain district advantages but also hides some disadvantages. Undoubtedly, the best solution could be combination of both methods, so that the advantages of both may prevail and any obstacles or misgivings are put aside.

IENE Special Report stresses the Significant Potential of Greece's Hydrocarbon Resources

Hydrocarbons will continue to be a key component of the energy mix at global and European level, including Greece, for several years to come, according to a Special Report prepared by IENE on the <u>"Economic and Geopolitical Benefits of Hydrocarbon Exploitation in Greece"</u>, which was released and presented at an online press conference on April 18, 2022.

The report highlights the significant potential of Greece for the development of its hydrocarbon sector and for targeted research by the companies concerned, with the goal of discovering and exploiting oil and natural gas deposits. As it is underlined, the need to leverage this potential is particularly intense today, given the observed shortage of energy supply - especially natural gas - due to the current price crisis and the geopolitical instability that has arisen because of the war in Ukraine. As the report underlines, the objective of lower energy dependence is combined with the effort to boost the economy and strengthen the country's geopolitical position. According to the data contained in the Report, there are specific geological targets that have already been identified through the processing of research data which has resulted from seismic surveys to date.



The main conclusions of the Report

After a thorough review of both the exploration and production experience in Greece so far and in view of the country's energy needs, the IENE Report draws a number of useful conclusions:

After a thorough review of both the exploration and production experience in Greece so far and in view of the country's energy needs, the IENE Report draws a number of useful conclusions:

- Despite the longstanding efforts of the Greek State and by the consortia of Greek and foreign concessionaires, the Greek hydrocarbon industry, apart from the activity at Prinos, has not managed to develop to date.
- The licensing procedure for granting exclusive rights for exploration and production areas has been and remains highly bureaucratic and timeconsuming.
- Both the investment risk and the high research costs are not in the slightest borne by the state budget, but exclusively by the contracting consortia.
- The size and economic value of potential hydrocarbon reserves cannot be determined with precision, due to currently incomplete research data. However, on the basis of existing seismic research and analysis, it is estimated that gas reserves are in the order of 2.0-2.5 trillion cubic meters.
- At technical level, there is a need for a supplementary denser seismic network (two and three dimensions) as well as for accelerated elaboration of additional geological studies.

- The presence of energy groups, such as the TotalEnergies and the ExxonMobil, Hellenic Petroleum and Energean, as well as the expressed interest by other major companies, enhance the prospect of having very significant hydrocarbon reserves, especially in the Ionian Sea region and in the west and southwest of Crete.
- The presence of the TAP pipeline, which is already in operation, the Greece-Bulgaria (IGB) interconnector, which is under construction, the planned EastMed and the four new FSRUs (two in Alexandroupolis, one in Agioi Theodoroi of Corinth and one in Volos), reinforce the geopolitical and geostrategic value of Greece and the wider Balkan and Southeast European region.
- The gradual weakening of the coronavirus pandemic will lead to an increase in demand and higher production of hydrocarbons. As long as supply remains low, energy costs related to hydrocarbons will remain high.
- At the same time, it is becoming increasingly clear that in a complex and unstable geopolitical environment, the pursuit of energy self- sufficiency will be reaffirmed as a key objective of energy strategies pursued by EU countries and beyond. Therefore, it is necessary for the State to provide the necessary guarantees

for the rapid approval of the required permits, in accordance with current legislation, in order to expedite hydrocarbon exploration work.

- Greece must and can transform from being an exporter of petroleum products and an importer of crude and natural gas to a producer of hydrocarbons and an exporter of natural gas. Such an outlook creates business opportunities by attracting much needed private investment, the creation of new jobs, the reduction of overall energy costs, the increase of energy security while helping to achieve diversification of supply, and the revitalizing of a highly indebted economy. At the same time increased hydrocarbon activity may enhance the country's geopolitical and geostrategic importance.
- Gaseous hydrocarbons provide an important bridge of green energy transition with the ultimate goal of achieving lower pollutant/carbon emissions. They can and should complement Renewable Energy Sources. Part of their revenues can and should be invested in green technologies (hydrogen, carbon capture-storage, development of natural gas storage). Hence, identifying and exploiting domestic hydrocarbon reserves, in particular gaseous hydrocarbons, is imperative.

Publications & other

The Key Role of Energy in the National Plan for Recovery and Resilience -An Urgent Need for a Strategy to Boost Industry and Production Investments



The pivotal role of energy in the National Plan for Recovery and Resilience and the need for investments in production was the subject of <u>a special</u> <u>study by IENE</u>, which was presented at an online event organized by the Institute of Energy for SE Europe (IENE) on Wednesday 20, 2021.

The event began with a short introduction by the Chairman and Executive Director of IENE, Costis Stampolis, who referred to the initiative of the Institute to prepare a special study on the need for investments in Greek industry, so that they boost domestic production in parallel with the investments and projects that will run through the Recovery Plan.

The study was then presented by Irini Terzidou, Scientific Associate and Research Fellow of IENE, which highlighted the resounding absence from the subsidized investments of "Greece 2.0", the Greek industry of production of components / systems for RES projects and infrastructure projects, which could play a catalytic role in the creation of domestic know-how, employment, and domestic added value.

The discussion that followed featured Thomais Eftychidou, Secretary General of Industry of the Ministry of Development and Investment, Athanasios Savvakis, President of the Federation of Industries of Greece and the Hellenic Energy Exchange, Stelios Psomas, Advisor of the Hellenic Association of Photovoltaic Companies and Christos Dimas, Member of the Board and Chairman of the Geopolitics Committee of IENE. The discussion was moderated by Costis Stampolis, Chairman of IENE.

Taking the floor, Ms. Eftychidou stressed that, in terms of government policy, emphasis has been given on hydrogen, where there is a target for specific projects through Projects of Common Interest (PCI's). This does not deprive the possibility of expanding the scope of industrial production to cover products and systems of the energy sector and especially of RES.

This was followed by a statement made by Mr. Savvakis, who stated that the energy transition gives the opportunity to create infrastructure, expand industrial production and increase domestic added value.

With regard to energy sector products, there is indeed the possibility of upgrading industrial production, e.g., from 15% of domestic value added today to 30%, attracting investments of 4 billion over the next 10 years.

Financial Times publishes letter by IENE's chairman

Following the publication over the last few days by Financial Times columnists of a series of articles on the difficulties and problems involved related to the attempted rapid decarbonisation and the uphill path towards decarbonisation, IENE's chairman responded by welcoming FT's change of tack. His full letter addressed to the editor of the FT and as published in October 13, 2021 edition follows:



It's a rocky road to a future free from fossil fuels

It has become crystal clear over the past few weeks that the energy transition is not going to be an easy ride, with renewable energy sources becoming the dominant energy source in a short period of time ("Gas crisis shows why we must stop demonising fossil fuels", Opinion, September 25; "Memo to countries going green: don't be like the UK", Opinion, October 7). We continue to face ever increasing gas and electricity prices, the outcome of many years of under-investment in basic energy infrastructure and the negative sentiment systematically cultivated in certain quarters against coal and fossil fuels in general.

Although it is true that sometime in the future renewable energy sources, backed by advanced power electronics and ample hydrogen and battery storage, should be able to shoulder the majority of the electric load, we are not there yet. The technology at the scale required does not yet exist. Meanwhile, until we reach the happy stage of clean fuels providing the bulk of required energy, we have to rely on gas and nuclear.

> Costis Stambolis Chairman Institute of Energy for SE Europe (IENE) Athens, Greece



■ IENE Publishes Flagship "South East Europe Energy Outlook 2021/2022"



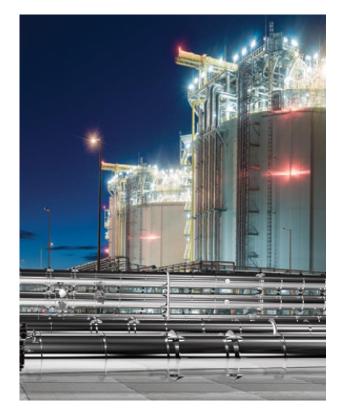
The <u>"South East Europe Energy Outlook 2021/2022"</u>. IENE's major reference study, which deals with the current energy situation and prospects in the SE European region and covers the "Outlook" from now until 2040 was completed after two years of intensive preparation and research. <u>The publication</u>, released both in printed and digital form, consists of 15 chapters and 1,402 pages and presented for the first time in a special event held at the Athens Exchange on Tuesday, March 1, 2022 with the backing of the Hellenic Energy Exchange (ENEX).

The study, which contains substantial comparative data, detailed sectorial analysis, and energy demand and production estimates and projections on all 15 of the region's countries. In addition to IENE's inhouse research team, 25 experts from all different countries in SEE contributed in the Outlook study by preparing Country Profiles and sectorial analysis. Furthermore, the study was reviewed by a team of 20 internationally recognized authorities who acted as peer reviewers.

The research comprises nine specific parts: energy policy, energy security, country energy surveys, legal framework, regional economic issues, sectorial analysis, energy demand and supply projections for 2040 (oil and gas, electricity, renewables, energy efficiency), energy technologies and energy investment outlook. The energy sector analysis focuses on the region's as energy drivers such as petroleum (upstream, midstream, downstream), natural gas, power generation, renewables, energy efficiency, co-generation, and environmental protection. A major part of the study concerns the individual countries of the region and contains an energy profile of each one of the core 15 countries. Another important part of the study covers the energy interconnections in South East Europe, the Black Sea and the Caspian region for oil, gas and electricity. The major energy projects of the region (oil and gas pipelines, gas storage, nuclear plants, hydrocarbon exploration projects, refineries, RES installations and energy efficiency projects) are described and fully analysed. Latest developments in the energy market liberalization process both for electricity and gas and the broader aspects of environmental and energy security considerations in South East Europe were also examined.

This year's "Outlook'' for the first time includes an analysis of the energy technologies which are appropriate for application in SEE. The study concludes with an in-depth analysis and projections of the investment potential per energy fuel and per country but also assesses the business opportunities of the region's entire energy sector.

This latest IENE study was financially supported by a group of 16 companies and organizations from Greece and other countries in SE Europe. The main sponsor of the study (Lead Sponsor) is Hellenic Petroleum (ELPE), while the sponsors (Sponsors) include the companies: Hellenic Energy Exchange (ENEX), IPTO, DEPA, EPIAS (Turkey) and Elpedison. In preparing the study IENE was also assisted by a group of supporter companies which included: IBEX (Bulgaria), Energean, Motor Oil, DESFA, DEDA, EDEY, Elval Halcor, GreenTop, Ensco and KG Law Firm.



Understanding the power of energy

IENE's primary mission is to promote a broader understanding of the key energy and environmental issues in the SE European region and provide a suitable platform for the exchange of views and information, open to professionals, companies, stakeholders and others who are actively involved in the energy sector.

IENE's vision is to establish itself as the leading energy think tank in the region and at the same time develop a highly credible and worthwhile range of services covering research, assessment studies, sectorial surveys, educational activities, event organisation and networking. These services to be offered primarily to its members, but also to government and industry and other stakeholders.

Join us!



Lean more about our work and become a member

www.iene.eu



3, Alex. Soutsou 106 71 Athens, Greece T: +30 210 3628457 +30 210 3640278 F: +30 210 3646144 Email: admin@iene.gr www.iene.eu

IENE News

is an occasional newsletter published by the Institute of Energy for South East Europe